



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

December 4, 2013

Via E-mail

Scott McNeill
Chief Financial Officer
RSP Permian, Inc.
3141 Hood Street, Suite 701
Dallas, Texas 75219

**Re: RSP Permian, Inc.
Registration Statement on Form S-1
Filed November 12, 2013
File No. 333-192268**

Dear Mr. McNeill:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-1 Filed November 12, 2013

Prospectus Summary, page 1

Verde Acquisition, page 9

1. Please amend your document to disclose the current producing well count on and daily production from the acreage you acquired with the Verde Acquisition. Include the number of well bore penetrations through the Wolfcamp B that allowed you to analyze the prospectivity for this acreage by application of the tools/techniques you describe on pages 5 and 87 in response to our prior comment three.

Our Ownership and Organizational Structure, page 11

2. We note your disclosure at page 126 regarding the ownership of Rising Star LP and Rising Star GP by Natural Gas Partners VIII, L.P. and certain members of your management team. Please add such disclosure to your summary at page 11.

Business, page 84

Pro Forma PUDs, page 97

3. In response to our prior comment 10, you disclosed figures for PUD reserves converted to developed status and the historical cost incurred for their development as represented in the table below. The projected unit development costs you used in the standardized measure (pages F-17, F-71, F-84) all appear to be about \$18/BOE. Please explain to us why you "...do not believe there is a significant difference between historical and projected costs." Address the fact that the unit costs projected at December 31, 2012 are roughly half the costs incurred during 2012. Please tell us the number of gross and net wells you drilled to convert these PUD reserves in each of the periods. We may have further comment.

Period	PUD to	Cost	Developed
Ending	Developed	Incurred	Unit Cost
	MMBOE	\$ million	\$/BOE
12 mos 12-31-12	5.1	180	35
6 mos 6-30-13	3.9	77	20
18 mos 6-30-13	9	257	29

Executive Compensation, page 118

4. We note your response to prior comment 13. Please revise your filing to clarify the material terms of the incentive units. For example, please revise to clarify how the units vest, and the significance of vesting. In addition, please clarify the payout triggers for the units, and provide relevant examples. Please provide such disclosure based on the terms of the units both before and after your corporate reorganization and this offering.
5. Please revise to clarify what would constitute a "Fundamental Change" for the purposes of the incentive units after your reorganization and this offering.

Index to Financial Statements, page F-1

6. Please update all applicable financial statements. Refer to Rule 3-12 of Regulation S-X.

Standardized Measure of Discounted Future Net Cash Flows, page F-17

Notes to Unaudited Pro Forma Combined Financial Statements, page F-16

Note 3 – Supplemental Disclosure of Oil and Natural Gas Operations, page F-17

7. We note your response to comment 19 in our letter dated November 4, 2013 and the related revisions to your disclosure. Please revise the disclosure regarding the pro forma tax impact to the standardized measure of discounted cash flows to sum the amounts presented.

Predecessor Financial Statements

Unaudited Historical Combined Financial Statements

Combined Balance Sheets, page F-22

8. We note from your response to comment 20 in our letter dated November 4, 2013 that you characterized the accumulated positive balance in ACTOIL's Net Profits Account as deferred revenue "in order to properly reflect the early reduction of the deficit." Based on your reply, it does not appear that the characterization of these funds as deferred revenue provides a clear indication of the nature of this item. Please revise the caption on the face of your balance sheet accordingly.

Historical Combined Financial Statements

Notes to Combined Financial Statements

Note 9 – Members' Equity, page F-42

9. We note your response to comment 23 in our letter dated November 4, 2013 and the related revisions to the disclosure provided in your filing. Please provide us with additional detail regarding the return thresholds associated with these incentive units. As part of your response, please provide sufficient detail to support your assertion that a payout event requiring the recognition of expense is not expected to occur.
10. We note your disclosure regarding Tier I and IA units states that the extent of your ability to achieve certain return thresholds was uncertain at the grant date. Please tell us how you evaluated the probable outcomes of the performance conditions associated with these awards in accordance with FASB ASC 718-10-25-20. In addition, please tell us how the assessment of your ability to achieve these return thresholds has changed since the grant date. Please include background information regarding these units such as the number of units issued by grant date and the vesting schedule as part of your response.

Note 11 – Supplemental Disclosure of Oil and Natural Gas Operations (Unaudited),
page F-68

Costs incurred in oil and gas property acquisition, exploration and development,
page F-68

11. We note your disclosure under this heading includes a separate line item for “Asset retirement obligations.” Please revise your presentation to reflect the disclosure specifically required by FASB ASC 932-235-50-18 and reflected in Example 3 in FASB ASC 932-235-55-4.

Results of operations for oil- and gas-producing activities, page F-69

12. We note your disclosure under this heading includes a separate line item for “Accretion of asset retirement obligations.” Please revise your presentation to reflect the disclosure specifically required by FASB ASC 932-235-50-26 and reflected in Example 4 in FASB ASC 932-235-55-5.

Exhibits

13. In response to prior comment 30, you indicate that the RSP Permian L.L.C. agreement is not a material contract pursuant to Item 601(b) of Regulation S-K. Please provide an analysis to support your determination. In addition, please provide an analysis with respect to whether you are required to file such agreement under Item 601(b)(10)(iii) in connection with the terms of the management incentive units. Similarly, please file the agreements that will govern the terms of the incentive units after the corporate reorganization and the offering.
14. Please revise your exhibit index to include all agreements that you intend to file as exhibits, including those you reference in response to prior comment 30.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Jennifer O'Brien, Staff Accountant, at (202) 551-3721 or Ethan Horowitz, Accounting Branch Chief, at (202) 551-3311 if you have questions regarding comments on the financial statements and related matters. You may contact Ronald Winfrey, Petroleum Engineer, at (202) 551-3704 with questions about engineering comments. Please contact Caroline Kim, Attorney-Adviser, at (202) 551-3878 or Laura Nicholson, Attorney-Adviser, at (202) 551-33584 with any other questions.

Sincerely,

/s/H. Roger Schwall

H. Roger Schwall
Assistant Director

cc: Douglas E. McWilliams
Vinson & Elkins LLP